Table J-32. Comparison of accident risks for the mostly rail heavy-haul truck and barge shipping scenarios.[a]

Category	Mostly rail (heavy-haul option–24 sites)	Mostly rail (barge option–17 of 24 heavy-haul sites)	Mostly truck
Population dose (person-rem)	0.89	1.5	0.5
Estimated LCFs[b]	0.00045	0.001	0.0002
Traffic fatalities[c]	2.7	2.7	4.5

a. Impacts are totals over 24 years.
b. LCF = latent cancer fatality.
c. Traffic fatality impacts for mostly rail scenarios are the average of the range of estimated traffic fatality impacts (2.3 to 3.1) for national transportation for the Proposed Action.

J.2.4.3.3 *Maximum Reasonably Foreseeable Accidents*

From a consequence standpoint, because DOE used the same accident severity bins for rail, heavy-haul truck, and barge transport, the consequences of a release would be the same if the accident occurred in a zone having the same population density. The population densities for barge and heavy-haul truck transport are similar to those for rail. Because the total shipping distance traveled by barge or heavy-haul truck would be a small fraction of the total distance traveled, the maximum reasonably foreseeable accident would be a rail accident. Only minor barge or heavy-haul truck transport accidents would meet the 1×10^{-7} criterion used to identify reasonably foreseeable accidents.

J.3 Nevada Transportation

With the exceptions of the possible construction of a branch rail line or upgrade of highways for use by heavy-haul trucks and the construction of an intermodal transfer station, the characteristics of the transportation of spent nuclear fuel and high-level radioactive waste in Nevada would be similar to those for transportation in other states across the nation. Unless the State of Nevada designated alternative or additional preferred routes as prescribed under regulations of the U.S. Department of Transportation (49 CFR 397.103), Interstate System Highways (I-15) would be the preferred routes used by legal-weight trucks carrying spent nuclear fuel and high-level radioactive waste. Unless alternative or non-Interstate System routes have been designated by states, Interstate System highways would also be the preferred routes used by legal-weight trucks in other states during transit to Nevada.

In Nevada as in other states, rail shipments would, for the most part, be transported on mainline tracks of major railroads. Operations over a branch rail line in Nevada would be similar to those on a mainline railroad, except the frequency of train travel would be much lower. Shipments in Nevada that used heavy-haul trucks would use Nevada highways in much the same way that other overdimensional, overweight trucks use the highways along with other commercial vehicle traffic.

Some State- and county-specific assumptions were used to analyze human health and safety impacts in Nevada. A major difference would be that much of the travel in the State would be in rural areas where population densities are much lower than those of many other states. Another difference would be for travel in an urban area in the state. The most populous urban area in Nevada is the Las Vegas metropolitan area, which is also a major resort area with a high percentage of nonresidents. The analysis also addressed the channeling of shipments from the commercial and DOE sites into the transportation arteries in the southern part of the State. Finally, the analysis addressed the commuter and commercial travel that would occur on highways in the southern part of the State as a consequence of the construction, operation and monitoring, and closure of the proposed repository.

This section presents information specific to Nevada that DOE used to estimate impacts for transportation activities that would take place in the State. It includes results for cumulative impacts that would occur in Nevada for transportation associated with Inventory Modules 1 and 2.